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10/596,615	06/19/2006	Attila Bader	P18918-US1	8459
27045	7590	06/04/2010	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			GHOWRWAL, OMAR J	
			ART UNIT	PAPER NUMBER
			2463	
			NOTIFICATION DATE	DELIVERY MODE
			06/04/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

kara.coffman@ericsson.com

jennifer.hardin@ericsson.com

melissa.rhea@ericsson.com

Office Action Summary

Application No.

10/596,615

Applicant(s)

BADER, ATTILA

Examiner

OMAR GHOWRWAL

Art Unit

2463

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19, 20, 22, 24, 25, 27-33 and 35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19, 20, 22, 24, 25, 27-33 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Remarks

1. This Office action is considered fully responsive to the amendment filed 3/16/10.

Response to Arguments

2. Applicant's arguments with respect to claims 19-20, 22, 24-25, 27-33, 35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. **Claims 32, 35** are rejected under 35 U.S.C. 102(a) as being anticipated by "Connection admission control in UMTS radio access networks" to *Malomsoky et al.* ("*Malomsoky*").

As to claim 32, *Malomsoky* discloses a node in a packet switched telecommunication network wherein said node is associated with a resource reservation of an ON-OFF like traffic in said telecommunication network (page 2012-2013, fig. 2, transmission between nodes of UTRAN, ON and OFF periods, signaling (RSVP) is used in the RMD protocol; RSVP is known to have an initiator and receiver, abstract CAC occurs over Iub interface, i.e. a node of the UTRAN--see fig. 2), said node comprising sub-objects of

descriptors of the desired QoS (page 2012, CAC makes decisions based on traffic descriptors and QoS parameters);

packet level traffic parameters characterizing the traffic envelope representing the upper bound of said ON-OFF traffic (page 2018, $Q(x)$ is the complementary distribution function of the virtual waiting time in a FIFO queue in the CAC, page 2019, an upper bound to $Q(x)$ is obtained evaluating formulas pertaining to various TTI (ON-OFF traffic) values);

a description of source statistics including distribution type (page 2018, $Q(x)$ is the complementary distribution function of the virtual waiting time in a FIFO queue in the CAC, page 2019, an upper bound to $Q(x)$ is obtained evaluating formulas pertaining to various TTI (ON-OFF traffic) values) and parameters representing the behavior of said ON-OFF traffic wherein the parameter includes a length of the ON periods and wherein the parameter of the length of the ON periods is the mean time of ON periods (page 2012, activity factor calculation includes an average (mean) length of ON periods); and

wherein said node is a router of a Terrestrial Radio Access Network of a Universal Mobile Telecommunications Network (UTRAN) (abstract, CAC is applicable on Iub interface; fig. 2, Iub is part of nodes of UTRAN).

As to claim 35, *Malomsoky* further discloses the node of claim 32, wherein the parameters includes a length of the OFF periods and wherein the parameter of the length of the OFF periods is the mean time of the OFF periods (page 2012, activity factor includes average length of OFF periods).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 19-20, 24-25, 27-28, 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over "Connection admission control in UMTS radio access networks" to *Malomsoky et al. ("Malomsoky")* in view of U.S. Publication No. 2001/0054103 A1 to *Chen*.

As to claim 19, *Malomsoky* discloses a method, in a packet switched telecommunications network having a plurality of nodes (page 2012, fig. 1, packets are transmitted, UTRAN nodes), for providing resource reservation between a reservation initiator and a reservation receiver of an ON-OFF like traffic (page 2012-2013, fig. 2, transmission between nodes of UTRAN, ON and OFF periods, signaling (RSVP) is used in the RMD protocol; RSVP is known to have an initiator and receiver), comprising the steps of:

defining an object including descriptors of the desired Quality of Service (QoS) (page 2012, CAC makes decisions based on traffic descriptors and QoS parameters), packet level traffic parameters characterizing the traffic envelope wherein said traffic envelope represents the upper bound of said ON-OFF traffic (page 2018, $Q(x)$ is the complementary distribution function of the virtual waiting time in a FIFO queue in the CAC, page 2019, an upper bound to $Q(x)$ is obtained evaluating formulas pertaining to

various TTI (ON-OFF traffic) values), and sub-object of description of source statistics for a call admission control wherein said source statistics include distribution type (page 2018, $Q(x)$ is the complementary distribution function of the virtual waiting time in a FIFO queue in the CAC (i.e. sub-object and distribution type)) and parameters representing the behavior of said ON-OFF traffic (page 2013, activity factor) wherein the parameter includes a length of the ON periods (page 2012, activity factor calculation includes an average length of ON periods) and wherein the parameter of the length of the ON periods is the mean time of ON periods (page 2012, activity factor contains average (mean) length of ON periods);

Malomsoky does not expressly disclose initializing reservation for a flow of transmission of the ON-OFF like traffic in the reservation initiator;

reserving resources in the nodes along the flow of transmission with the use of said object wherein nodes are routers of a Terrestrial Radio Access Network of a Universal Mobile Telecommunications Network (UTRAN);

receiving reservation message in the reservation receiver;

and, sending back an acknowledgement to the reservation initiator.

Chen discloses nodes that interface with a UTRAN 28 (i.e. they are terrestrial nodes of the UTRAN), (para. 0020), a PATH message is sent from TE 32, and it is forwarded until it reaches network 40, where a RESV message is sent back to TE 32, the message is passed along nodes of the UTRAN after validating QoS parameters (fig. 5, para. 0029-0031, para. 0007).

Malomsoky and *Chen* are analogous art because they are from the same field of endeavor regarding UMTS data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the RSVP details as taught by *Chen* into the invention of *Malomsoky*. The suggestion/motivation would have been to reserve resources in third generation UMTS systems with no or minimal impact on existing architecture or QoS procedures (*Chen*, para. 0011).

As to claim 20, *Malomsoky* and *Chen* further disclose the method of claim 19, wherein the call admission control uses the description of source statistics in each node along the flow of transmission (*Chen*, para. 0007, PATH message carries traffic characteristics information such as Tspecs to indicate the traffic behavior that is to be sent from the user (i.e. traffic behavior at the source—*Malomsoky*, page 2012, activity factor is a traffic descriptor, page 2013, activity factor is distributed per class); fig. 5, all nodes as part of flow from source to destination receive the PATH message). In addition, the same suggestion/motivation of claim 19 applies.

As to claim 24, *Malomsoky* and *Chen* further disclose the method of claim 19, wherein the parameter includes a length of the OFF periods and wherein the parameter of the length of the OFF periods is the mean time of OFF periods (*Malomsoky*, page 2012, activity factor includes average length of OFF periods). In addition, the same suggestion/motivation of claim 19 applies.

As to claim 25, *Malomsoky* and *Chen* further disclose the method of claim 19, wherein said packet switched telecommunications network is an IP based network

(Malomsoky, fig. 2, IP is used; Chen, para. 0003, RSVP is for IP networks). In addition, the same suggestion/motivation of claim 19 applies.

As to claim 27, *Malomsoky and Chen* further disclose the method of claim 19, wherein the call admission control uses said description of source statistics in edge nodes of a resource domain along the flow of transmission (Chen, a PATH message is sent from TE 32, and it is forwarded until it reaches network 40, where a RESV message is sent back to TE 32, the message is passed along nodes of the UTRAN after validating QoS parameters (fig. 5, para. 0029-0031, para. 0007)—i.e. all nodes in the path are utilized, including edge nodes which can be interpreted as MT and SGSN as they are at the edge of UTRAN 28 (resource domain)). In addition, the same suggestion/motivation of claim 19 applies.

As to claim 28, *Malomsoky* discloses a system for providing resource reservation in a packet switched network (page 2012-2013, fig. 2, transmission between nodes of UTRAN, ON and OFF periods, signaling (RSVP) is used in the RMD protocol; RSVP is known to have an initiator and receiver) including a plurality of nodes linked together by transmission channels (figs. 1-2), in which system the resource reservation of an ON-OFF like traffic is implemented (page 2012-2013, fig. 2, transmission between nodes of UTRAN, ON and OFF periods, signaling (RSVP) is used in the RMD protocol; RSVP is known to have an initiator and receiver) and wherein at least a part of the plurality of nodes (abstract, CAC is applicable on lub interface; fig. 2, lub is part of nodes of UTRAN) comprise:

means for processing descriptors of the desired QoS (page 2012, CAC makes decisions based on traffic descriptors and QoS parameters);

means for processing packet level traffic parameters characterizing the traffic envelope wherein said traffic envelope represents the upper bound of said ON-OFF traffic (page 2018, $Q(x)$ is the complementary distribution function of the virtual waiting time in a FIFO queue in the CAC, page 2019, an upper bound to $Q(x)$ is obtained evaluating formulas pertaining to various TTI (ON-OFF traffic) values);

means for processing description of source statistics wherein said source statistics include distribution type (page 2018, $Q(x)$ is the complementary distribution function of the virtual waiting time in a FIFO queue in the CAC) and parameters representing the behavior of said ON-OFF traffic wherein the parameter includes a length of the ON periods and wherein the parameter of the length of the ON periods is the mean time of ON periods (page 2012, activity factor calculation includes an average (mean) length of ON periods); and

wherein nodes are routers of a Terrestrial Radio Access Network of a Universal Mobile Telecommunications Network (UTRAN) (fig. 2, transmission between nodes of UTRAN).

Malomsoky does not expressly disclose a reservation initiator and a reservation receiver.

Chen discloses nodes that interface with a UTRAN 28 (i.e. they are terrestrial nodes of the UTRAN), (para. 0020), a PATH message is sent from TE 32, and it is forwarded until it reaches network 40, where a RESV message is sent back to TE 32,

the message is passed along nodes of the UTRAN after validating QoS parameters (fig. 5, para. 0029-0031, para. 0007).

Malomsoky and *Chen* are analogous art because they are from the same field of endeavor regarding UMTS data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the RSVP details as taught by *Chen* into the invention of *Malomsoky*. The suggestion/motivation would have been to reserve resources in third generation UMTS systems with no or minimal impact on existing architecture or QoS procedures (*Chen*, para. 0011).

As to claim 31, *Malomsoky* and *Chen* further disclose the system of claim 28, wherein the nodes are IP routers of an IP network (*Malomsoky*, fig. 2, IP is used in routing; *Chen*, para. 0003, RSVP is for IP networks). In addition, the same suggestion/motivation of claim 28 applies.

7. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over "Connection admission control in UMTS radio access networks" to *Malomsoky et al.* ("*Malomsoky*") in view of U.S. Publication NO. 2001/0054103 A1 to *Chen* and in further view of U.S. Patent No. 6,707,790 B1 to *Wu et al.* ("*Wu*").

As to claim 22, *Malomsoky* and *Chen* do not further disclose the method of claim 19, wherein the distribution type includes a length of the ON and/or OFF periods and wherein the distribution type of the length of the ON and/or OFF periods are exponential.

Wu discloses, col. 4, lines 42-54, interval has length of "t" which defines $v(t)$, and $v(t)$ is used to express a truncated exponential distribution, $v(t)$ relating to admission control of traffic flows (col. 3, lines 42-66).

Malomsoky, Chen and Wu are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the $v(t)$ as taught by Wu into the invention of Malomsoky and Chen. The suggestion/motivation would be to determine the maximum-entropy distribution for the flow (Wu, col. 4, lines 42-54).

8. **Claim 29** is rejected under 35 U.S.C. 103(a) as being unpatentable over "Connection admission control in UMTS radio access networks" to *Malomsoky et al.* ("*Malomsoky*") in view of U.S. Publication No. 2001/0054103 A1 to *Chen* and in further view of U.S. Publication No. 2002/0160785 A1 to Ovesjo et al. ("*Ovesjo*").

As to claim 29, *Malomsoky* and *Chen* further discloses a base station controller and a radio network controller of the packet switched network (Malomsoky, fig. 2, RNC, and Node B).

Malomsoky and *Chen* does not expressly disclose the system of claim 28, wherein the reservation initiator (RI) is a base station controller and the reservation receiver (RR) is a radio network controller of the packet switched network.

Ovesjo further discloses the BSC sending a handover required message to the core network (BSC is the initiator), which then sends a relocation request message to t-

RNC, which then reserves radio resources (RNC is reservation receiver) (fig. 3, items 3-2 to 3-5, para. 0038-0039).

Malomsoky, Chen and Ovesjo are analogous art because they are from the same field of endeavor regarding data communications.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the BSC sending a handover required message to the core network, which then sends a relocation request message to t-RNC, which then reserves radio resources as taught by Ovesjo into the invention of *Malomsoky* and *Chen*. The suggestion/motivation would have been to have an inter-RAT handover procedure triggered by the BSC (Ovesjo, para. 0038).

9. **Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over "Connection admission control in UMTS radio access networks" to *Malomsoky et al.* ("*Malomsoky*") in view of U.S. Publication No. 2001/0054103 A1 to *Chen* and in further view of WO 00/62572 to Willars.

As to claim 30, *Malomsoky* and *Chen* further discloses a base station controller and a radio network controller of the packet switched network (*Malomsoky*, fig. 2, RNC, and Node B).

Malomsoky and *Chen* do not expressly disclose the system of claim 28, wherein the reservation initiator (RI) is a radio network controller and the reservation receiver (RR) is a base station controller of the packet switched network.

Willars discloses RNC requests a DCH set up, and BSC receives this request (fig. 5A).

Malomsoky, Chen, and Willars are analogous art because they are from the same field of endeavor regarding data communications.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the RNC requests a DCH set up, and BSC receives this request as taught by Willars into the invention of *Malomsoky* and *Chen*. The suggestion/motivation would have been to for the base station controller to reserve and set up the necessary dedicated channel processing resources at the base station (Willars, page 10, lines 12-13).

10. **Claim 33** is rejected under 35 U.S.C. 103(a) as being unpatentable over "Connection admission control in UMTS radio access networks" to *Malomsoky et al.* ("*Malomsoky*") in view of U.S. Patent No. 6,707,790 B1 to *Wu et al.* ("*Wu*").

As to claim 33, *Malomsoky* does not further disclose the node of claim 32, wherein the distribution type includes a length of the ON and/or OFF periods and wherein the distribution type of the length of the ON and/or OFF periods is exponential.

Wu discloses, col. 4, lines 42-54, interval has length of "t" which defines $v(t)$, and $v(t)$ is used to express a truncated exponential distribution, $v(t)$ relating to admission control of traffic flows (col. 3, lines 42-66).

Malomsoky and Wu are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the $v(t)$ as taught by Wu into the invention of *Malomsoky*. The

suggestion/motivation would be to determine the maximum-entropy distribution for the flow (Wu, col. 4, lines 42-54).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR GHOWRWAL whose telephone number is (571)270-5691. The examiner can normally be reached on M-Th 10a.m.-8:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick Ferris can be reached on (571)272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/O. G./
Examiner, Art Unit 2463

/Derrick W Ferris/
Supervisory Patent Examiner, Art Unit 2463